



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,689	01/24/2002	Jeremy M. Stein	010374	8893
23696	7590	10/17/2005	EXAMINER	
Qualcomm, NC 5775 Morehouse Drive San Diego, CA 92121			LU, JIA	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/057,689	Applicant(s) STEIN ET AL	
	Examiner Jia W. Lu	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-33 and 36 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-23, 34 and 35 is/are rejected.
- 7) ☒ Claim(s) 5, 24 and 37-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments, see Remarks/Arguments, filed on September 22, 2005, with respect to the rejection(s) of claim(s) 1, 7, 8 and 34 under 102(e) have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of the same reference used (US 6,341,140)

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 6-8 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Dong Wook Lee and Hun Lee in US patent No. 6,341,140.
  - a. Regarding claims 1 and 7, patent '140 shows a system comprising correlation logic for determining, using a dynamically variable integration time (abstract, lines 7-14), a correlation function representing the correlation (figure 2, element 24) between a signal and a version of an identification code (figure 2, element 25), and analysis logic (figure 2,

element 26 and 27) for analyzing the correlation function (column 3, lines 55-61) and estimating one or more parameters relating to the signal (column 4, lines 7-12).

- b. Regarding claims 6, 8, and 34, patent '140 shows a system configured to estimate one or more parameters of a first signal using a first integration time (figure 2, at time 1), and of a second signal received after a first signal using a second integration time which may be different than the first integration time (figure 2, at time 2 after time 1).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 9-23 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,341,140 as applied to claims 1 and 8 above, and further in view of US patent No. 6,477,162.

- a. Regarding claims 2, 16, and 35, patent '140 does not explicitly show the use of a second integration time if the first one does not succeed.

However, patent '162 shows a selection between two different integration times based on a selection criteria (column 7, lines 52-58). Although this selection arrangement is different than the trial and error arrangement

presented in current claim, it is a matter of design choice whether the particular integration time is adjusted and chosen before an unsuccessful integration time is used, or after. The results of these arrangements are identical: the superior integration time is chosen and implemented for a most efficient yet effective integration time. Thus, it would have been obvious for one ordinarily skilled in the art to use the form of adjusting an integration time shown in patent '162 in a system of '140 for dynamic integration period adjustments.

- b. Regarding claims 3, 4, 11, 12, 19, 20, patent '162 describes the second integration time to be either longer or shorter than the first integration period (column 7, lines 53-59), and it would have been obvious for one ordinarily skilled in the art to use a longer integration time to increase accuracy in signal measurements, or a shorter integration time to enable a more speedy detection.
- c. Regarding claims 9, 17, patent '162 shows the signals evaluated to be pilot signals (figure 8, element 88), and it would have been obvious for one ordinarily skilled in the art to use a pilot signal to efficiently obtain information about the signal in order to make a fast decision on the integration time.
- d. Regarding claims 10, 18, patent '140 shows the identification codes to be PN codes (column 2, lines 11-30).

5. Claims 13, 14, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,341,140 and No. 6,477,162 as applied to claims 8 and 16 above, further in view of US patent application publication 2002/0115448 A1, filed in Aug. 3, 2001. It is well known in the art that the root mean square error and the time of arrival are very useful parameters in GPS system, as shown by publication '448 (paragraph 111), and it would have been obvious to one ordinarily skilled in the art to use these parameters in a system described above in aiding determination of the position of a remote terminal.
6. Claims 15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,341,140 and No. 6,477,162 as applied to claims 8 and 16 above, further in view of US patent 6,204,812. The parameter " $E_c/I_o$ " is well known in the art to be an important quality measurement of received signals in a GPS system, as shown by patent '812 (column 9, lines 25-27), and it would have been obvious to one ordinarily skilled in the art to use this parameter to determine the reliability of demodulated information from a received signal.

***Allowable Subject Matter***

7. Claims 25-26, 28-31, 33 and 36 are allowed.
8. Claims 5, 24, 37-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jia W. Lu whose telephone number is 571-272-6042. The examiner can normally be reached on Mon- Fri, 9:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jia Lu  
Examiner

  
**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**